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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,835	11/01/2001	Howard L. Danzyger	36/1058	7646

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EXAMINER	
SHENG, TOM V	

ART UNIT	PAPER NUMBER
2673	8

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/002,835	Applicant(s) DANZYGER ET AL.	
	Examiner Tom V Sheng	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4 is/are rejected.

7)☒ Claim(s) 5-9 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLoone et al. (US 2002/0158844 A1) in view of Hinckley et al. (US 2002/0030667 A1).

As for claims 1 and 2, McLoone teaches a graphical display scrolling system (figure 1) comprising:

an apparatus for displaying viewable elements (image 1) of a graphical display (display screen 2);

an input device (mouse 60) having a rotatable element (wheel 30; page 3, paragraphs 32, 33) connected with the apparatus. McLoone further teaches the scrolling (vertical) corresponds directly to the rotational motion generated by the user (page 3, paragraph 36).

However, McLoone does not teach wherein rotation of the rotatable element causes the viewable elements of the graphical display to scroll at a rate that is constant and independent of the rate or rotation of the rotatable element.

Hinckely teaches a scrolling device (figure 2) for display using a touch-sensitive surface. In particular, Hinckley teaches both the fixed rate and the variable rate of

scrolling (page 8, paragraph 71). One of ordinary skill in the art would recognize that a fixed or constant scroll rate is the simpler and easier way to implement scrolling display because, as in the case of Hinckley, parameters such as finger speed, finger pressure, or frequency of taps would not be required to be mapped into corresponding scroll rate. Obviously, a fixed scroll rate has its limitation that generally it needs to be slow enough for a user to view the scrolling image.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate a fixed rate scrolling display as taught by Hinckley into McLoone's invention, because it offers an alternative choice to scrolling and also the extra implementation required is minimal.

As to claim 3, a track ball is an obvious alternative to a scroll wheel since they both work on similar mechanical or optical encoding principles.

As to claim 4, McLoone teaches an input device (figure 1) for scrolling a graphical display (display screen 2) comprising:

a rotatable element (figure 1 or 4; wheel 30 or 40; page 2, paragraphs 28, 32-33);

a motion signal generator (figure 7; rotational movement sensing system 53 having a light source, an encoder wheel and a light detector, together with a controller 11) responsive to motion of the rotatable element, wherein the motion signal generator detects motion of the rotatable element (by the rotational movement sensing system 53) and generates motion signals (by the controller 11; page 3, paragraph 36);

a motion signal interpreter (a host computer 8) in communication with the motion signal generator, that scroll the image in the Y-direction up or down.

However, McLoone does not teach wherein the motion signal interpreter providing one output signal at the end of a predetermined period of time when one or more motion signals are detected within the predetermined period of time.

Hinckely teaches a scrolling device (figure 2) for display using a touch-sensitive surface. In one aspect of his invention, he teaches discriminating between real and unintentional small movement by the user's finger on the touch-sensitive surface of the scrolling device 100 (figure 1A or 1B). He teaches the use of timeout periods to find out if a finger movement has exceeded a threshold, and if so, a flag would be set indicating a real movement (scroll). This setting of a flag upon the end of a timeout period when a real movement is detected reads on claimed provision of one output signal at the end of a predetermined period of time when one or more motion signals (real motion signals) are detected within the predetermined period time (figure 5; page 6, paragraphs 55, 56). Note that even though Hinckley uses two timeout periods, it could just as well be done with just one timeout period.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate Hinckley's Moving/Not Moving Detection into McLoone's scrolling display input device because of the benefit of eliminating unintentional scrolling of display image.

McLoone's host computer performs the scrolling operation and is obviously software driven. However, McLoone does not teach a software driver in communication with the motion signal interpreter wherein the software driver accepts output signals from the motion interpreter and generates line scrolling commands in response to

reception of the output signals, wherein the scrolling rate of the graphical display is constant when the rotatable element is rotated.

Hinckley teaches both the fixed rate and the variable rate of scrolling (page 8, paragraph 71). One of ordinary skill in the art would recognize that a fixed or constant scroll rate is the simpler and easier way to implement scrolling display because, as in the case of Hinckley, parameters such as finger speed, finger pressure, or frequency of taps would not be required to be mapped into corresponding scroll rate. Obviously, a fixed scroll rate has its limitation that generally it needs to be slow enough for a user to view the scrolling image.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate a fixed rate scrolling display as taught by Hinckley into McLoone's invention, because it offers an alternative choice to scrolling and also the extra implementation required is minimal.

Allowable Subject Matter

3. Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts teaches the limitations "wherein the motion interpreter comprises: a memory buffer that receives and stores motion signals from the motion signal generator; a timer that measures the predetermined period of time; a comparator

connected with the memory buffer and the timer to check if a motion signal has been received by the memory buffer within the predetermined period of time; and an output signal generator in communication with the software driver" of claim 5. Claims 6-9 are dependent on claim 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V Sheng whose telephone number is (703) 305-6708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Tom Sheng
October 31, 2003

Amare Mengistu
Primary Examiner